

IN THE CLAIMS

1. (Canceled) .
2. (Canceled) .
3. (Canceled) .
4. (Canceled) .
5. (Canceled) .
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8. (Canceled) .
9. (Canceled) .
10. (Canceled) .
11. (Canceled) .

12. (Currently Amended) A method for providing a hermetic seal between a window and a frame of an apparatus, comprising the steps of:

providing a window which is transmissive to radiation having a predetermined wavelength;

providing a frame which has an opening therethrough;

providing an annular sealing section between and in contact with each of said window and said frame, said sealing section extending completely around said opening;

heating said window, said frame and said sealing section to a selected temperature at which said sealing section has melted, said selected temperature being lower than melting temperatures of said frame and said window; and

thereafter cooling said window, said frame and said sealing section until said sealing section has solidified and formed between said window and said frame a hermetic seal which extends completely around said opening;

selecting for use in said sealing section ~~first and second glass materials which are different~~ a first glass material and a second glass material made from a material different from a material of the first glass material, said first glass material being an annular portion of said sealing section which extends around said opening of said frame in contact with said window and spaced from said frame, said second glass material being an annular portion of said sealing section which extends around said opening of said frame in contact with said frame and spaced from said window, and said first and second glass materials being in contact with each other between said window and frame;

selecting for use in said sealing section a third glass material which is different from each of said first and second glass materials, and which is an annular portion of said sealing section that extends around said opening of said frame in contact with each of said frame and said window, said third glass material being disposed on a side of said first and second glass materials nearest said opening in said frame.

13. (Currently Amended) A method according to Claim 12, ~~including the step of selecting for use in said sealing section a third glass material which is different from each of said first and second glass materials, and which is an annular portion of said sealing section that extends around said opening of said frame in contact with each of said frame and said window, said third glass material being disposed on a side of said first and second glass materials nearest said opening in said frame~~ wherein the apparatus includes a digital mirror device.

14. (Currently Amended) A method according to ~~Claim 13~~ Claim 12, including the step of selecting for use in said sealing section a fourth glass material which is different from each of said first and second glass materials, and which is an annular portion of said sealing section that extends around said opening of said frame in contact with each of said frame and said window, said fourth glass material being disposed on a side of said first and second glass materials remote from said opening in said frame.

15. (Canceled).

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).

20. (Canceled).

21. (Canceled).

22. (Canceled).

23. (Canceled).

24. (Canceled).

25. (Previously Presented) A method according to Claim 12, wherein said step of providing said frame includes the steps of:

using a metal to make said frame; and  
oxidizing a surface portion of said metal frame which will be engaged by said sealing section.

26. (Previously Presented) A method according to Claim 25, wherein said step of providing said frame includes the step of selecting an ASTM F15 steel material for use as said frame.

27. (Previously Presented) A method according to Claim 25, wherein said oxidizing step includes the step of placing said frame in a wet nitrogen furnace while heating said frame.

28. (Previously Presented) A method according to Claim 27, wherein said step of heating said frame within said furnace is carried out by heating said frame to a peak temperature in the range of approximately 975°C to 1005°C for a time period in the range of approximately 9 to 13 minutes.

29. (Previously Presented) A method according to Claim 27, including prior to said oxidizing step the step of placing said frame in a wet hydrogen furnace while heating said frame.

30. (Previously Presented) A method according to Claim 29, wherein said step of heating said frame within said wet nitrogen furnace is carried out by heating said frame to a peak temperature of approximately 1050°C for a time period in the range of approximately 11 to 15 minutes.

31. (Previously Presented) A method according to Claim 12, including the step of selecting for use as said window a material which includes a borosilicate glass.

32. (Previously Presented) A method according to Claim 12, wherein said step of providing said window includes the step of forming an antireflective coating on a side of said window that will face said frame and be in contact with said sealing section.

33. (Previously Presented) A method according to Claim 32, wherein said antireflective coating is one of silicon oxide and magnesium fluoride.